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UTILIZATION AND MARKETING

MONTANA FOREST PRODUCTS BULLETIN

Department of State Lands, Division of Forestry
2705 Spurgin Road, Missoula, Montana 59801
Ph: (406) 542-4300

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GARY G. BROWN, State Forester

PAUL MOORE, Editor

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This bulletin is mailed quarterly to individuals engaged in the Forest Products Industry in Montana. In addition, it is mailed to county agents, lumber brokers, wholesalers, dealers of sawmill and logging equipment and educators, as well as departments of forestry in many states.

The purpose of the newsletter is to communicate information regarding the properties and uses of wood products, promote the efficiency in the utilization of wood from the stump to the end product, and to serve as an information source for members of the forest products industry.

All persons receiving this newsletter are asked to examine their mailing addresses and advise this office of any corrections needed for proper mailing.

KILN: A PROGRAM TO DETERMINE WHEN TO INSTALL A WOOD-FUELED DRY KILN

Kiln is for use by owners and managers who are interested in adding a wood-fueled dry kiln to their facility. The computer analysis is intended as preliminary to indicate whether a facility may wish to carry out a more detailed economic and technical analysis.

Kiln was developed to analyze hardwood kiln drying, so several assumptions are specific to this case. However, if the user exercises care to alter these assumed values, the software can be used to analyze softwood kiln drying.

The program computes costs and benefits from a dry-kiln installation. From these costs and benefits, a discounted cash flow analysis is performed with payback period, internal rate of return, and present net worth calculated as measures of economic feasibility. For more information on this program contact Paul H. Short, Mississippi Cooperative Extension Service, Box 5446 Mississippi State University, MS 39762, phone (601) 325-2160.

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MONTANA'S FOREST PRODUCTS UTILIZATION & MARKETING PROGRAMS

FAB--The Fall & Buck Program (FAB), is used to evaluate bucking decisions and the amount of merchantable wood that is converted into logs. Representative trees are measured after bucking, taking care to measure cull sections, breakage and unutilized wood. The fallers cutting card is used by the computer to reconstruct the tree and then make its bucking decisions. Data can be entered so as to ignore breakage or force the computer to buck around the same breaks as the faller. Must buck points can be positioned to force the computer to buck at specified points as determined by the data collector.

FAB received considerable attention in its early years as a main frame program. Now that it's available on personal computers, companies may wish to evaluate its use as an internal quality control program. A few companies have adopted the program with good results, using it primarily as a quality control check and a tool to demonstrate good bucking decisions.

IMPROVE--Stands for Integrated Mill Production and Recovery Options for value and efficiency. IMPROVE is actually a collection of Integrated Mill Production and Recovery computer programs that measure lumber recovery from sample logs and machine performance in terms of size control. Improve consists of seven major programs, each capable of evaluating a specific process in the primary manufacturing of lumber, veneer, or plywood.

The following is a description of the programs developed under the Improved Lumber Manufacturing umbrella:

1. BOF Sawing Simulation allows the user to simulate lumber recovery under specified milling conditions. This routine uses the Best Opening Face (BOF) model which was developed at the Forest Products Laboratory.

   BOF is used to analyze the lumber recovery improvement potential or to simulate mill conditions based on different engineering design. BOF solutions for each log type are generated, then analyzed for mill flow impact.

2. Lumber Product Size Analysis helps determine how well target sizes are met and how much lumber variation occurs. It also aids in identifying the sources of poor size control and excessive variation.

3. Target Set Reduction is designed for use by sawmill owners and operators to quantify monetary losses due to tolerating oversized lumber and excessive lumber variation. The amount of oversizing for a particular size class/breakdown system combination is also quantified.

4. Lumber Recovery Analysis is designed to calculate the Lumber Recovery Factor (LRF) of mills using current milling conditions. It also shows the recovery improvement by improving manufacturing conditions.

5. Log Analysis has been designed to help mill owners/operators collect, organize and store information (data) about logs. This information is useful when buying or selling logs, determining inventory, knowing what is

processed over a period of time, conducting an efficiency study, etc. Log Analysis is also used to calculate log volumes, scales, averages, overlength, and bucking accuracy.

6. Saw Design Analysis helps the user select the correct saw for a particular setup. Often sawmillers operate their saws with less than adequate knowledge about correct bite, feed speeds, tooth speeds, side clearances, depths of cut, and power requirements. Saw Design analysis has been developed to integrate these variables quickly and accurately.

7. Veneer Product Size Analysis is designed for use by veneer mill owners and operators to access the performance of veneer equipment that determines sheet thickness and width. Two techniques are used--Analysis of Variance, ANOVA, and quality control charts. ANOVA is a point-in-time "moving picture" of variability and determines when the manufacturing process is not performing at it's capability. Veneer Product Size Analysis can provide the basis for setting up a statistical quality control system.

For information on the program best suited for your needs contact: Paul Moore at (406) 542-4300.

SIMPLE STEPS TOWARDS QUALITY

In their growing quest for product quality, American manufacturers may be overlooking the obvious. Keeping the plant efficiently organized and clean may not sound like the latest competitive strategy, but some simple house-keeping actions by employees at all levels in the plant can mean improved product quality.

"**Organization** makes all the difference in the plant environment," says Ernie Phillips, a control equipment mechanic in Dupont's Waynesboro, Virginia plant. "Our plant is much more efficient when tools and equipment are maintained in orderly fashion". Phillips admits that keeping his plant efficiently organized is a constant battle and that he and those he works with need frequent reminders.

Efficiency is worth striving for. An efficient team working in a plant is more likely to get the job done right the first time than is a group working in a disorganized, chaotic environment. Mistakes are so costly, in fact, that BUSINESS WEEK magazine estimates that the price of fixing mistakes, both before and after the product is sold, adds as much as 30% to production costs.

Well-organized work habits are as important as an orderly environment, according to Willie Kimbrell, an auto parts plant manager in Anderson, South Carolina. "Efficient work habits require disciplined thinking", says Kimbrell, "and that discipline leads to more effective work, greater job satisfaction, and therefore higher-quality products".

Like organization, **cleanliness** is another key to quality, Kimbrell says. "A clean workplace is a safer, more pleasant place to work. That means workers will be in a better frame of mind to do their best," Kimbrell maintains.

Bureau of Business and Economic Research
University of Montana
Missoula, Montana 59812

MONTANA SAWLOG AND VENEER LOG PRICE REPORT

Based on a survey of mills
January - March, 1990

The following information is a summary breakdown of recent past average prices reported by primary wood processors for logs of the various species listed. These prices are not necessarily a reflection of current market prices. Fair market prices may vary a great deal based on log size, length, quality, contract size and terms, and a number of other factors. All information reported is recent average price per thousand board feet (MBF), Scribner Decimal rule, delivered to the mill site, unless otherwise noted.

SAWLOGS Scribner Dec C MBF	REGION I	*	REGION II	*	REGION III	*	REGION IV	*
	Avg. Low High		Avg. Low High		Avg. Low High		Avg. Low High	
Ponderosa pine	133	G/F					170 170 170	G
(Yellow)			301 240 350	G	295 250 335	G		
(Bull)			223 200 240	G	170 145 210	G		
Lodgepole pine	160	G	243 220 300	G	198 170 220	G	198 185 230	G
Douglas-fir	160	G	234 220 250	G	208 185 230	G	198 185 230	G
Western larch			245 220 300	G	215 200 230	G		
Engelmann spruce	160	P	234 220 250	G	205 175 225	G	202 185 230	G
Subalpine fir			223 210 240	G	185 165 210	G	210 190 230	G
Grand fir			218 200 240	G	192 175 210	G		
Western red cedar			259 220 300	G				
Hemlock			215 210 220	G	183 165 200	F		
White pine			356 325 400	G				
Cottonwood							85 85 85	F

VENEER LOGS Scribner Dec C MBF	STATEWIDE REPORT			
Species	Avg.	Low	High	Demand next 60 days*
Douglas-fir	245	230	260	G
Ponderosa pine (Bull)	205	205	205	G
Western larch	245	230	260	G
Engelmann spruce	240	220	260	G
Other species	210	200	220	G

* Demand Next 60 days
G = Good
F = Fair
P = Poor

FEASIBILITY OF MINI SAWMILLS

This 15 minute video tape in VHS format discusses Rural Development through forestry, highlighting the feasibility of mini-sawmills. The intended audiences include community economic development specialists and potential entrepreneurs. For those of you who request a copy, you will also receive at a later date, a publication entitled, "Feasibility of mini sawmills." This document will discuss the economics of establishing such a mill that will employ three or for individuals. Copies of both may be purchased for $10.00, from Ralph Monahan, USDA Forest Service, P.O. Box 150, Medford, WI 54451, (715) 748-4875.

DEPARTMENT OF STATE LANDS TIMBER SALE

COLSTRIP TIMBER SALE

The Colstrip Timber Sale is located within the NW¼ Section 16, T1N-R39E in Rosebud County, within the jurisdiction of the Eastern Land Office. Approximately 291 MMBF, consisting entirely of ponderosa pine, is offered for sale.

Sealed bids will be opened at the Department of State Lands, Forestry Division, 2705 Spurgin Road, Missoula, Montana on September 4, 1990 at 2:00 p.m. Bids may be hand delivered or mailed and will be accepted anytime prior to the bid opening. Bids must be accompanied by a deposit of at least $364.00, representing 5% of the appraised value of the sale in cashier's check, certified check, bank money order, or bank draft, to be applied to the stumpage for the successful bidder. Bid bonds will be accepted, and for the successful bidder, will be closed upon execution of the timber sale agreement and timber sale bond.

Prospective bidders can obtain the sale prospectus, sample agreement and bid forms from the Department of State Lands, Forestry Division, in Missoula or the Eastern Land Office, Box 1794, Miles City, MT 59301, phone 406-232-2034.

FOREST ENGINEERING SOFTWARE AVAILABLE FROM OSU

For those in the logging business who own IBM computers, your in luck! Oregon State's Forest Engineering Department has developed a number of interesting programs that cover a wide range of logging activities. Here are a few of them: 1. Peak flow: Predicts runoff volume, sizes culverts, and performs a risk analysis. Campbell's equation is used to predict flow. 2. Truck PC: Estimates travel time, operating expense, and curve widening for conventional log trucks, short loggers, and low boys. 3. Logger PC: Determines logging feasibility of live skyline, or running skyline by payload analysis. The user

inputs ground profile and yarding parameter specifications. 4. Bridge: Designs wooden stringer bridges. Uses guidelines from AASHTO "Standard Specifications for Highway Bridges," 1983. These and other programs are available by contacting: Forest Engineering Department, Oregon State University, Corvallis, Oregon.

FOR SALE PRODUCTS & EQUIPMENT

For Sale: Northern white cedar shakes and shingles. 18" long, 1/2"-5/8" thick. Four bundles makes one square with an 8" exposure. For more information, phone/write Donald Hauner, Box 438, Littlefork, MN 56653, phone: (218) 278-4115.

For Sale: ¼" to 2½" dia. x 16' long or larger dowels, available in lengths up to 10' long, balls bases, blocks, electronic parts, handles, knobs, moldings, plugs, reels, rollers, shaping, spools, toy parts, wedges, and wheels. We treat for outside use. Also, Coopers and Food Processors supplies. Many other wood products to customer specifications. We now have a Weinig Profimat 22N molder to help you with that special molding you may need. Contact Ed Koelbl, American Wood Working Co., P.O. Box 335, Montello, WI 53949, phone (608) 297-2131, fax (608) 297-7124.

For Sale: Rough sawn timber and 7" to 12" round stock, cut from dead standing Red Fir and Spruce. Call with lengths and quantities needed for price quote. Contact Steve at Neville Log Homes, phone (406) 642-3091, fax (406) 642-3093.

For Sale: If you are not receiving American Lumber and Pallet you are missing the best forest industry publication. Our circulation is 30,000+ and growing daily. If you have a position of responsibility in the industry (foreman, etc.) you can call us today for a free subscription. Call 1-800-992-3432, American Lumber and Pallet, P.O. Box 1136, 104 N. Elk Ave., Fayetteville, TN 37334 (or please write us).

Wanted: Timbers, poles, and posts from reliable suppliers. All sizes and lengths and species. Peeled posts and poles. Round mine props 6' and 8'. We will arrange trucking. Contact Tom Albert, Albert Forest Products, Inc., P.O. Box 39, Ingomar, PA 15127, phone (412) 366-1440, fax (412) 366-1551.

For Sale: Slip-on pumper unit, 3,000 gal. tank, 8 hp B&S engine; 250' (1") hose-reel; 250' (1") linen hose; 20'-½" suction hose, good shape, phone (406) 642-3818.

For Sale: Large quantities of full sawn dimension lumber & boards, air dried, mixed species. Wanted: portable post & pole peeler to do custom peeling in our log yard. Contact R&V Logs and Lumber, Dillon, Montana, ask for Rod, phone (406) 683-501.

Equipment Wanted: One carving duplicator machine, prefer 12 spindles or larger. Please call collect, F. Gruss, phone: (612) 474-7195 or write 27280 Smithtown Rd., Shorewood, MN 55331.

RECENT PUBLICATIONS

The following list of publications has recently been published by the Forest Products Laboratory in Madison, Wisconsin. To obtain a free copy of this list, contact: Information Services, U.S. Department of Agriculture Forest Service, Forest Products Laboratory, One Gifford Pinchot Drive, Madison, Wisconsin 53705-2398 or phone (608) 264-5637.

1. Comparison of Preservative Treatments in Marine Exposure of Small Wood Panels, Bruce R. Johnson, David I. Gutzmer. Research Note FPL-RN-0258.

2. PLYMAP: A Computer Simulation Model of The Rotary Peeled Softwood Plywood Manufacturing Process, Henry Spelter. General Technical Report FPL-GTR-65.

3. Stress-Laminated Wood Bridge Decks--Experimental and Analytical Evaluations, Michael G. Oliva, Al G. Dimakis, Michael A. Ritter, Roger L. Tuomi. Research Paper FPL-RP-495.

4. Computer Programs for Adjusting the Mechanical Properties of 2-Inch Dimension Lumber for Changes in Moisture Content, James W. Evans, Jane K. Evans, David W. Green. General Technical Report FPL-GTR-63.

5. Moisture Content and Tensile Strength of Douglas-Fir Dimension Lumber, David W. Green, Roy F. Pellergin, James W. Evans, David E. Kretschmann. Research Paper FPL-RP-497.

MEETINGS

34th Annual Rocky Mountain Forest Industries Conference--October 24-26, 1990 at Howard Johnson Motor Lodge, 2211 LaCrosse St., Rapid City, SD 57701, phone (605) 343-8550 or 1-800-654-2000. The theme for this year's conference is, "Timber Supply: Risks and Challenges". This year's conference will not only point out the timber supply problem, but will focus on the challenges and opportunities as it relates to industry in the Rocky Mountain States.

How to Dry Lumber for Quality and Profit--December 3-7, 1990, Corvallis OR. Contact Mike Milota, Oregon State University, Peavy Hall 202, Corvallis OR., phone (503) 737-4210.

The Washington Idaho Montana Seasoning Club has tentatively scheduled a meeting to be held in Montana, Saturday, September 15, 1990. More information to follow.

First International Conference on Wood Protection With Diffusible Preservatives, November 28-30, 1990 Doubletree Hotel, Nashville, Tennessee. For more information contact the Forest Products Research Society, 2801 Marshall CT., Madison, WI 53705, phone (608) 231-1361 or fax (608) 231-2152.

If you wish to advertise a forest product or a piece of wood-processing machinery in this bulletin, complete form below. No charge is made for this service. If you wish to rerun item, a written request must be submitted before the next issue.

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